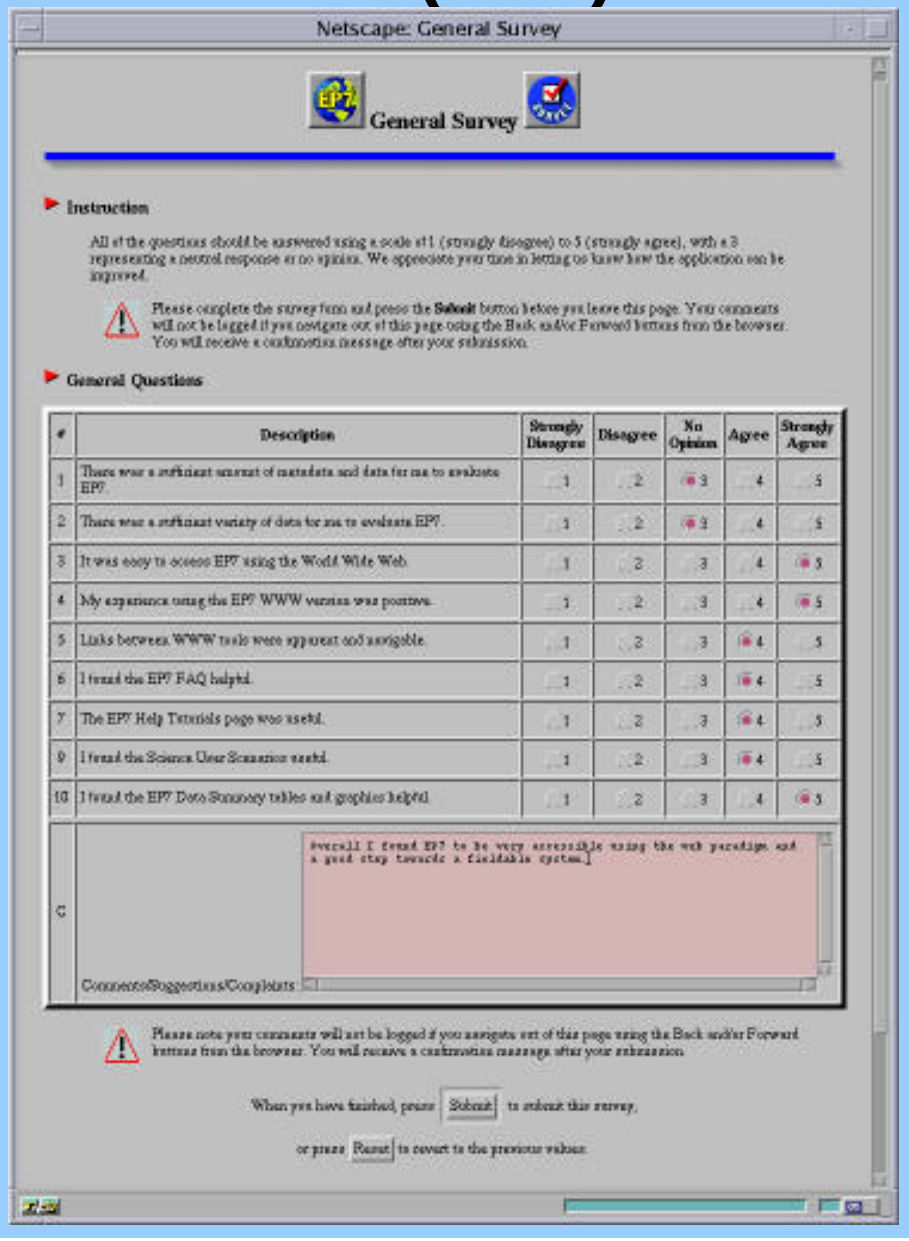
CLS Tools - Comment/Survey Tool (CST)



- HTML Tool
- Supports user survey capability
- Designed to support targeted surveys regarding ECS tools
- Multiple choice and free-text answers
- Interfaces with MSS server to maintain data
- Future implementations will integrate a general user feedback function

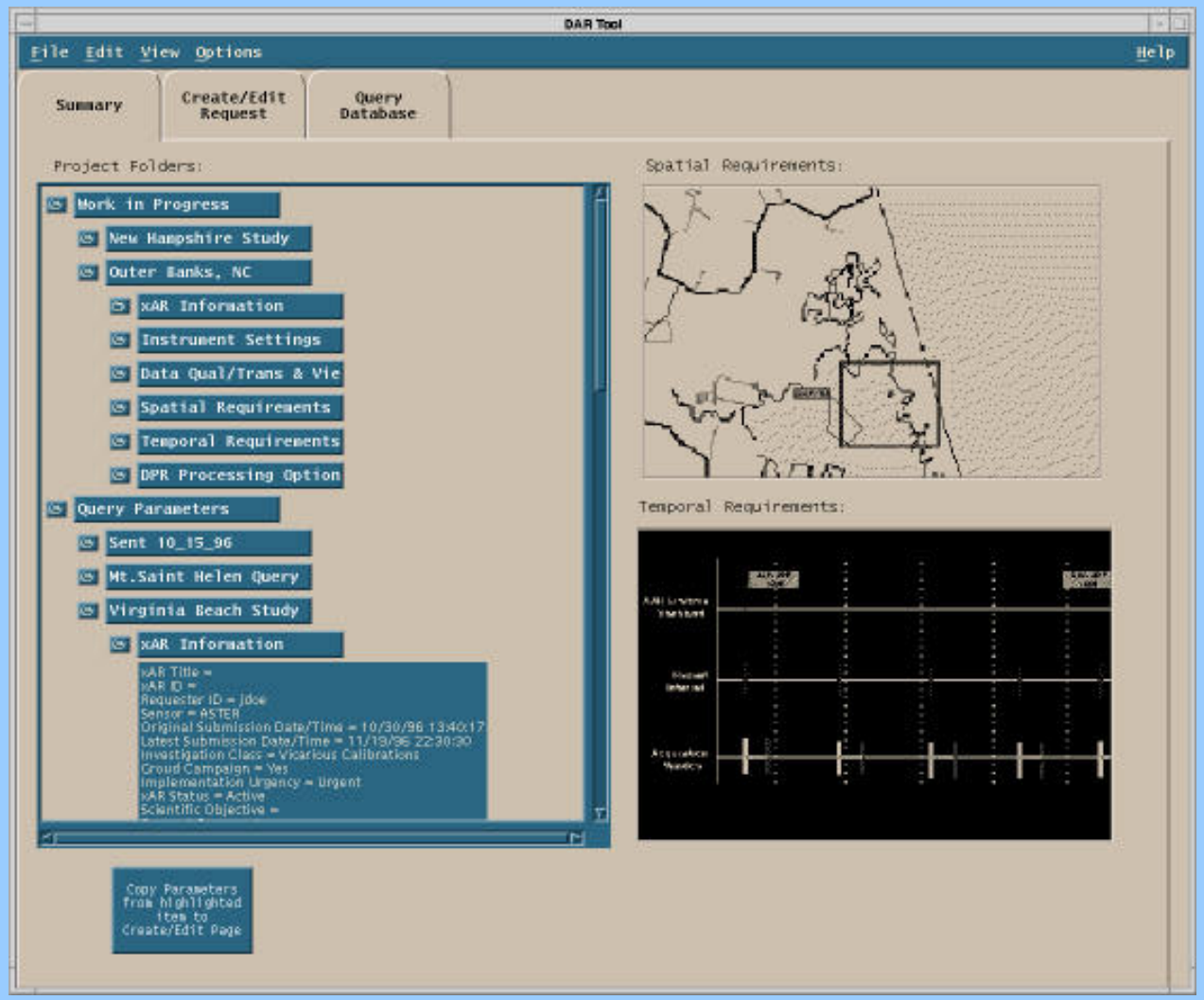
CLS Tools - Subscription Tool (SBT)

- Java or HTML tool
- Supports subscription to ECS event (e.g., insertion of a granule)
  - Allows user to qualify the subscription to that event (e.g., granule must be part of a certain collection - ShortName=ASTER)
  - Allows user to specify action to be taken when event occurs (e.g., acquire the granule)
- Allow user to submit and update subscriptions
- Accessible from any point in the user interface (key mechanism)

CLS Tools - Session Management Tool (SMT)

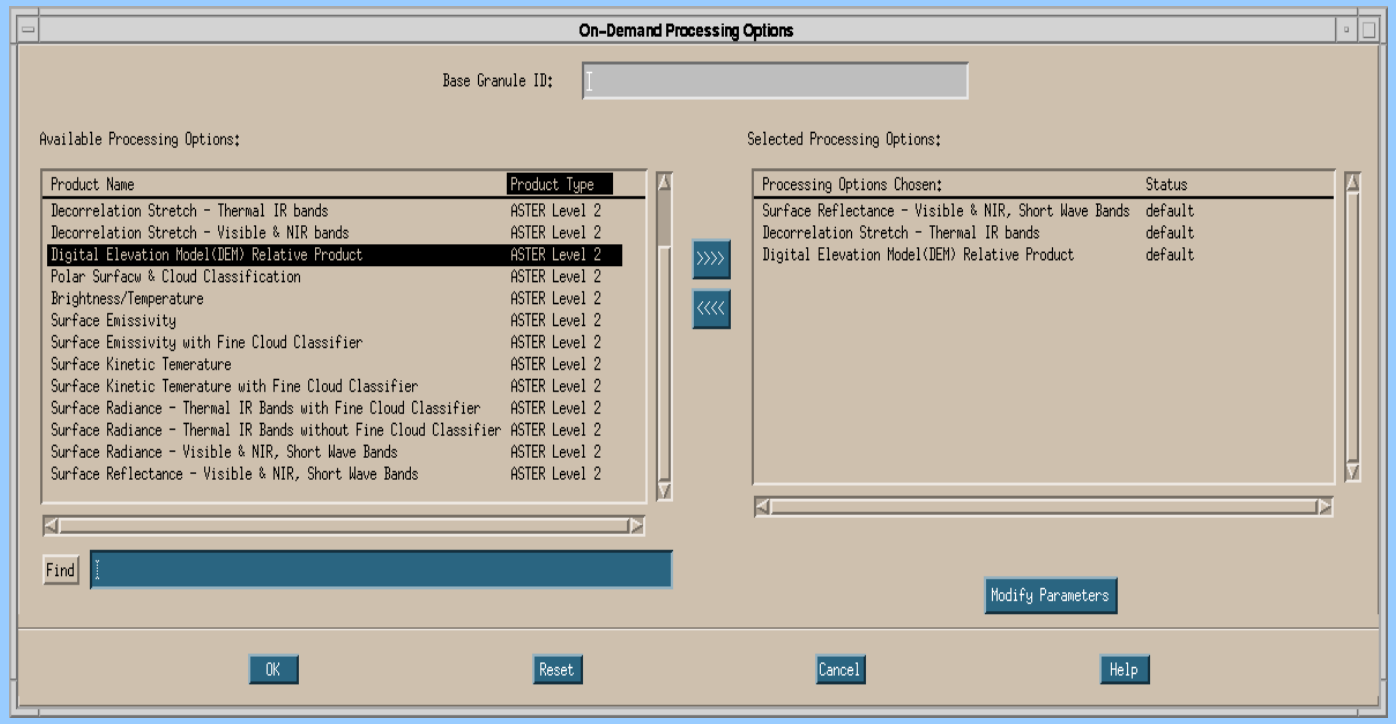
- Java Tool
- Displays session status to user (progress on requests , etc.)
- A session can be a search or request for any ECS service
- Allows user to suspend and resume session with the ECS service in question

CLS Tools - (ASTER) Data Acquisition Request Tool (DART)



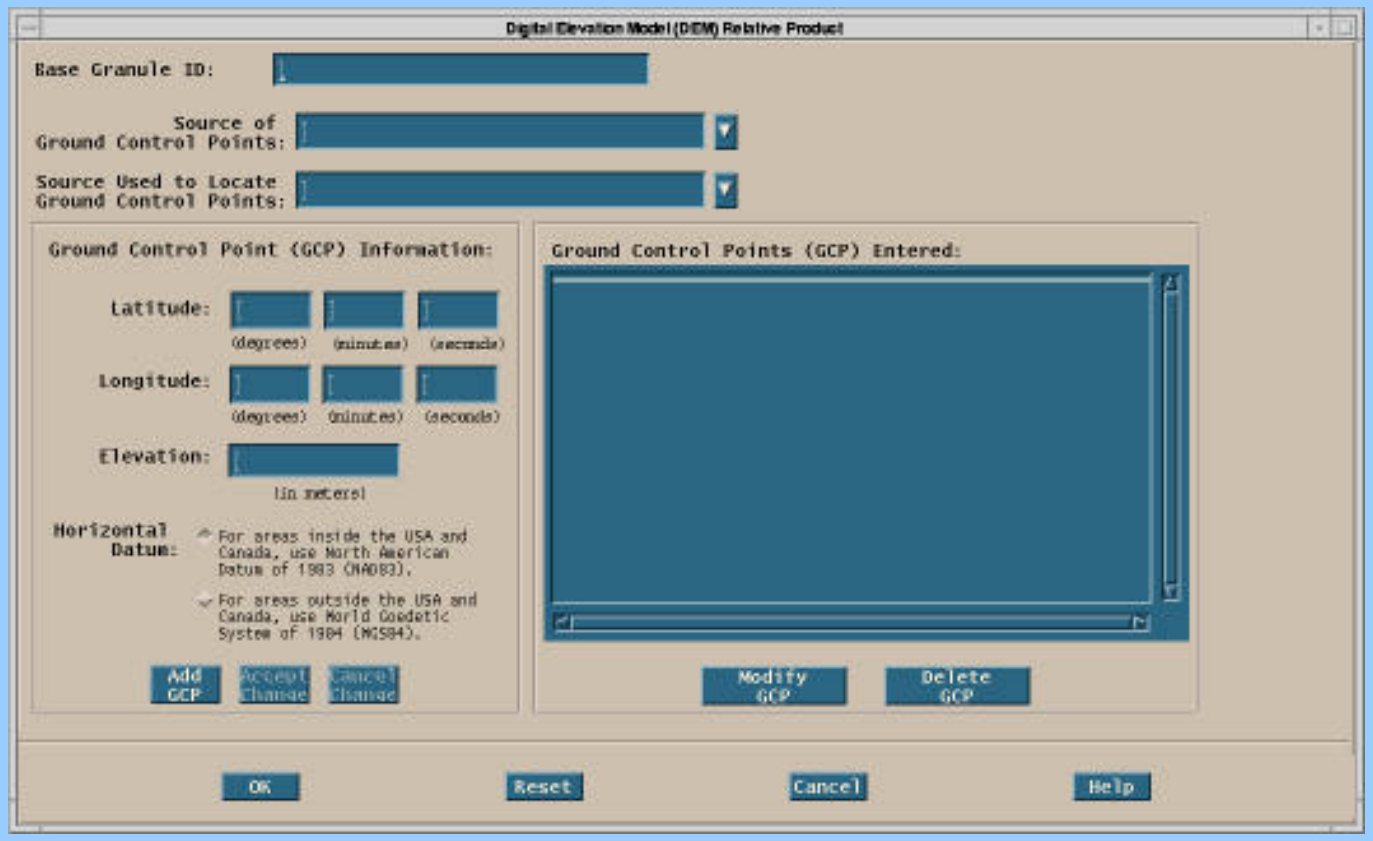
- X/Motif Tool
- Supports user's construction of a request to acquire data that the system does not yet contain
- An ASTER DAR can result in tasking the ASTER instrument
- Interfaces with the IDG ASTER Ground Data System (GDS) Gateway
- Allows registered users with the necessary privileges to create DARs and submit them to ASTER

CLS Tools - On-Demand Production Request Tool (DPRT)



- Java Tool (shown as X/Motif here)
- Allows user to request higher level processing be done on a specified product
- Integrated with DAR and the results screen of JEST
- Two steps
  - Select product
  - Specify product parameters

CLS Tools - On-Demand Production Request Tool cont'd

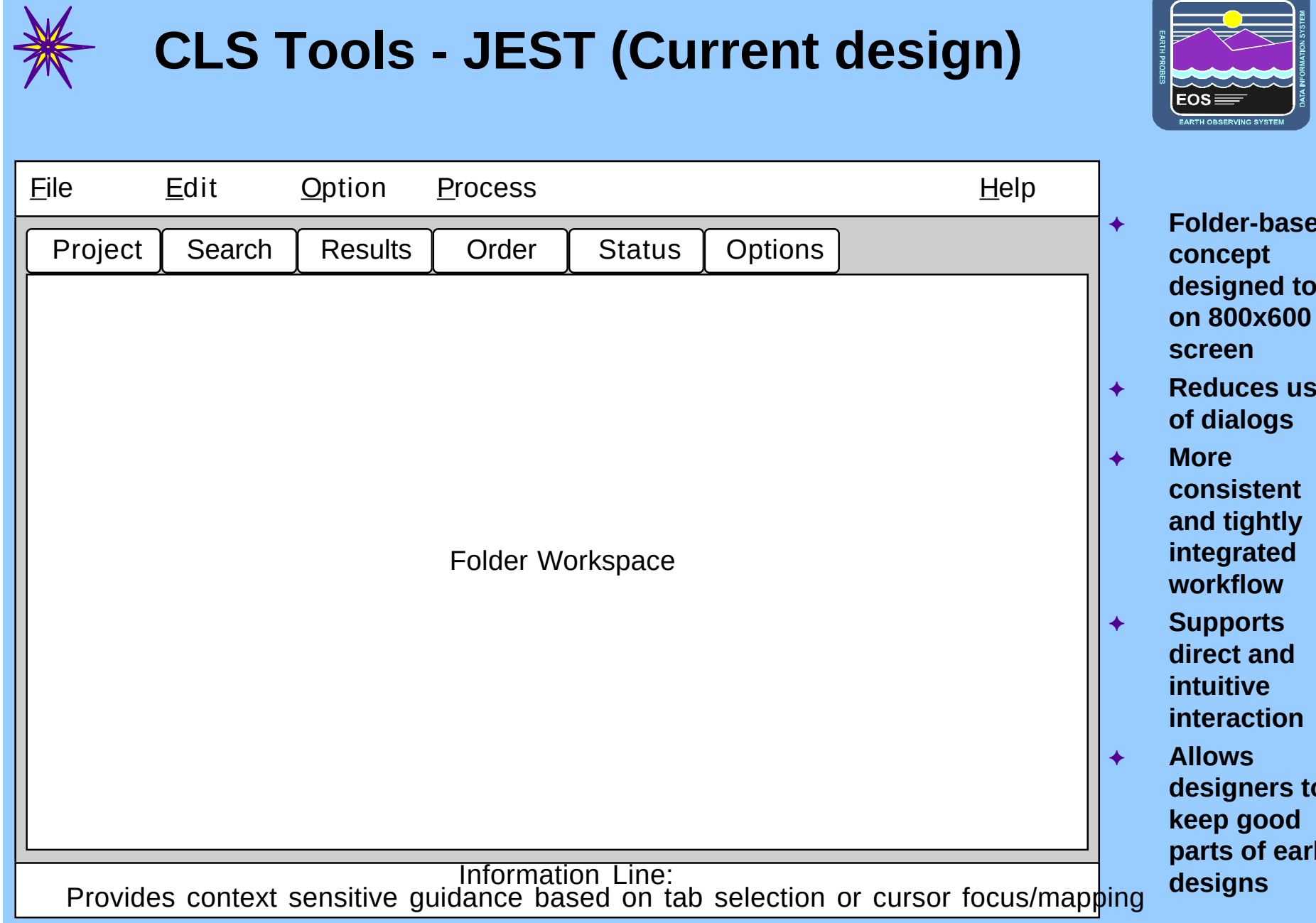


- Detailed specification based on requested product
- Screens support user-specified production values

CLS Tools - Java Earth Science Tool (JEST) Prototype (EP7)

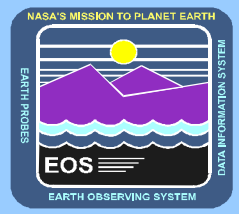
- Original prototype shown here
- Created to replace the original X/Motif ESST (Earth Science Search Tool)
- Primary function is to search granule inventory and allow users to invoke services on the inventory results

CLS Tools - JEST (Current design)



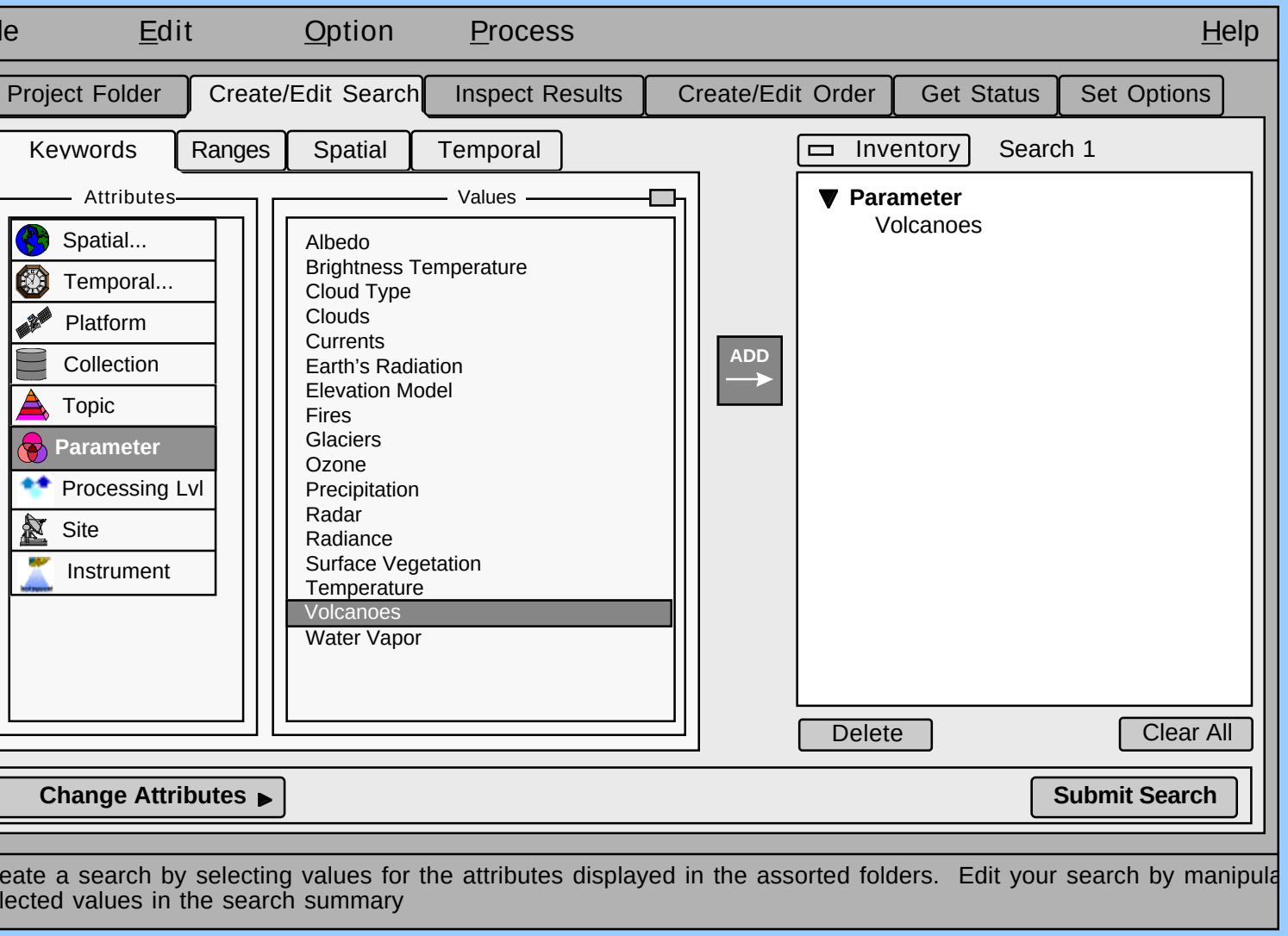
- **Folder-based concept designed to fit on 800x600 screen**
- **Reduces use of dialogs**
- **More consistent and tightly integrated workflow**
- **Supports direct and intuitive interaction**
- **Allows designers to keep good parts of earlier designs**

CLS Tools - JEST Function Goals



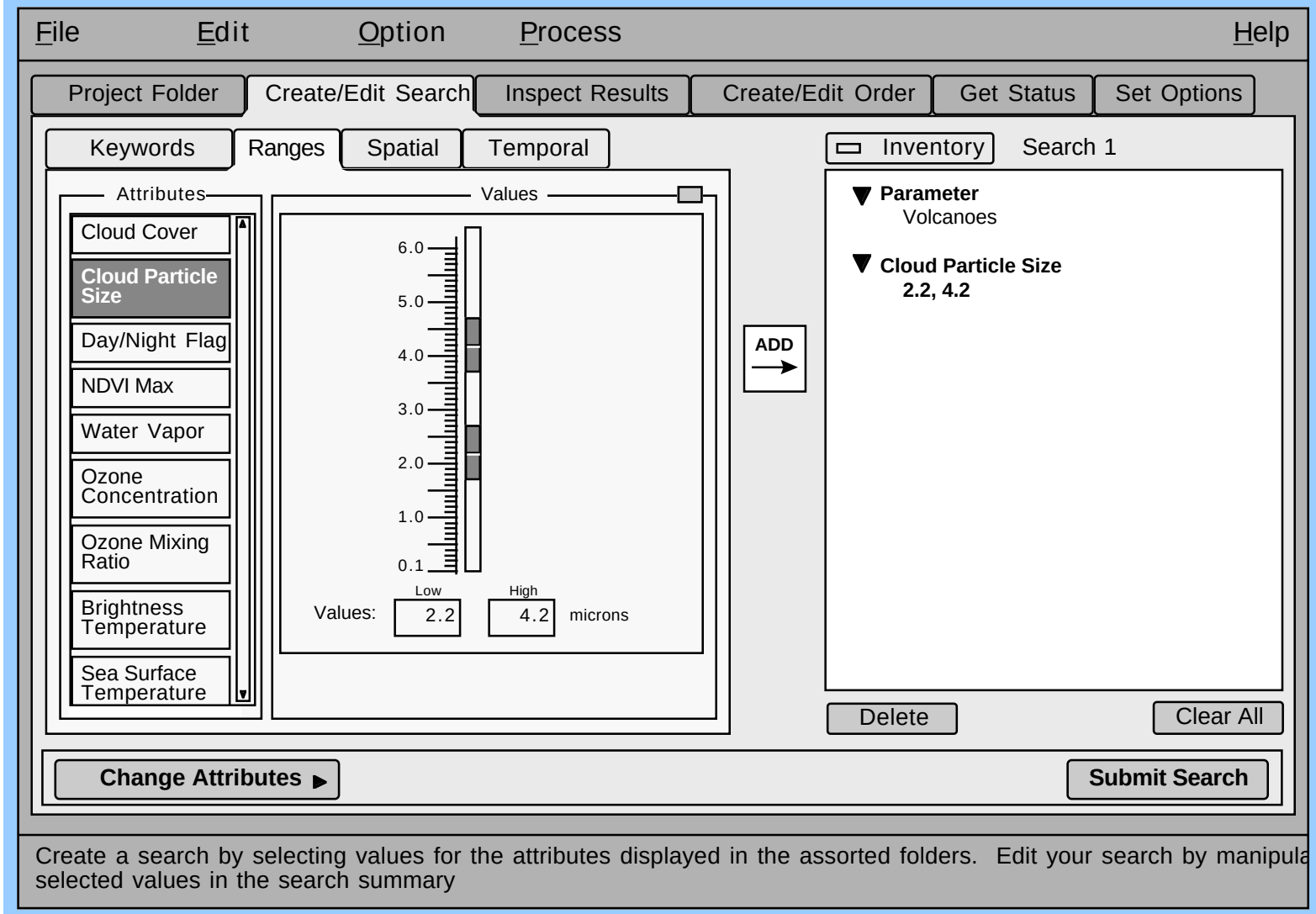
- **Primary function is as tool to search inventory granules**
- **Secondary functionality includes capability as integrated search tool**
  - **Allow different levels of search from a single interface**
    - **Advertising, Guide, Other Documents, Inventory, Production History, QA Stats**
    - **Search results from the varying levels are all displayed with the same format as inventory (table)**
    - **JEST Results user interface will also support the issuing of a second query to a different level given the results**
      - **“Find the guide data for this product advertisement”**
      - **“Find the inventory collection associated with this guide document”**

Functional Flows - Search Screen - Add Discrete (keyword) values



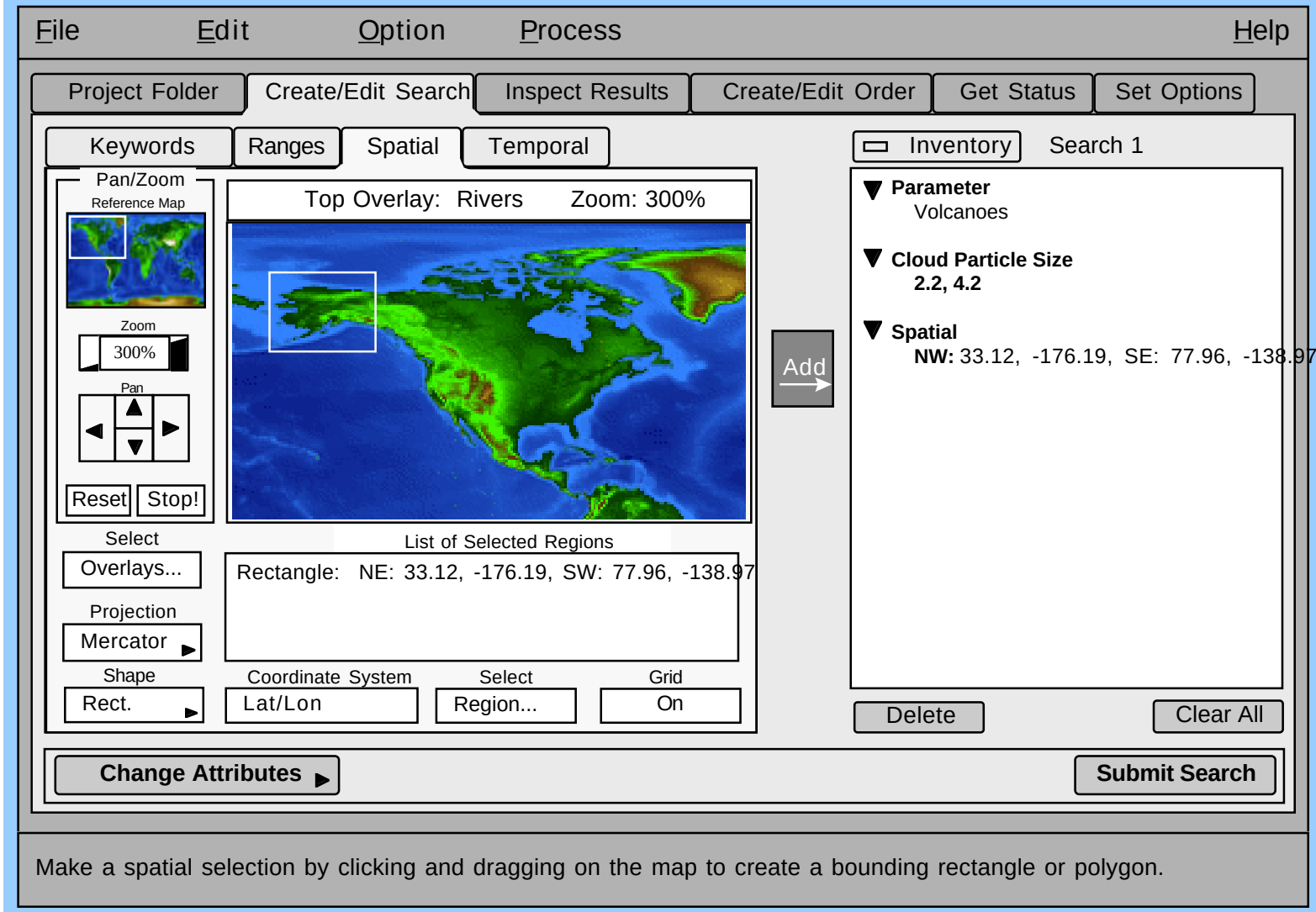
- **Searches are created by selecting values for the desired attributes**
- **Searches can be qualified by keywords, scale ranges, and spatial and temporal parameters**

Functional Flows - Search Screen - Add Range Values



- **Product Specific Attributes are typically selected via a range selector**
- **Process is the same: select an attribute and the value for it**

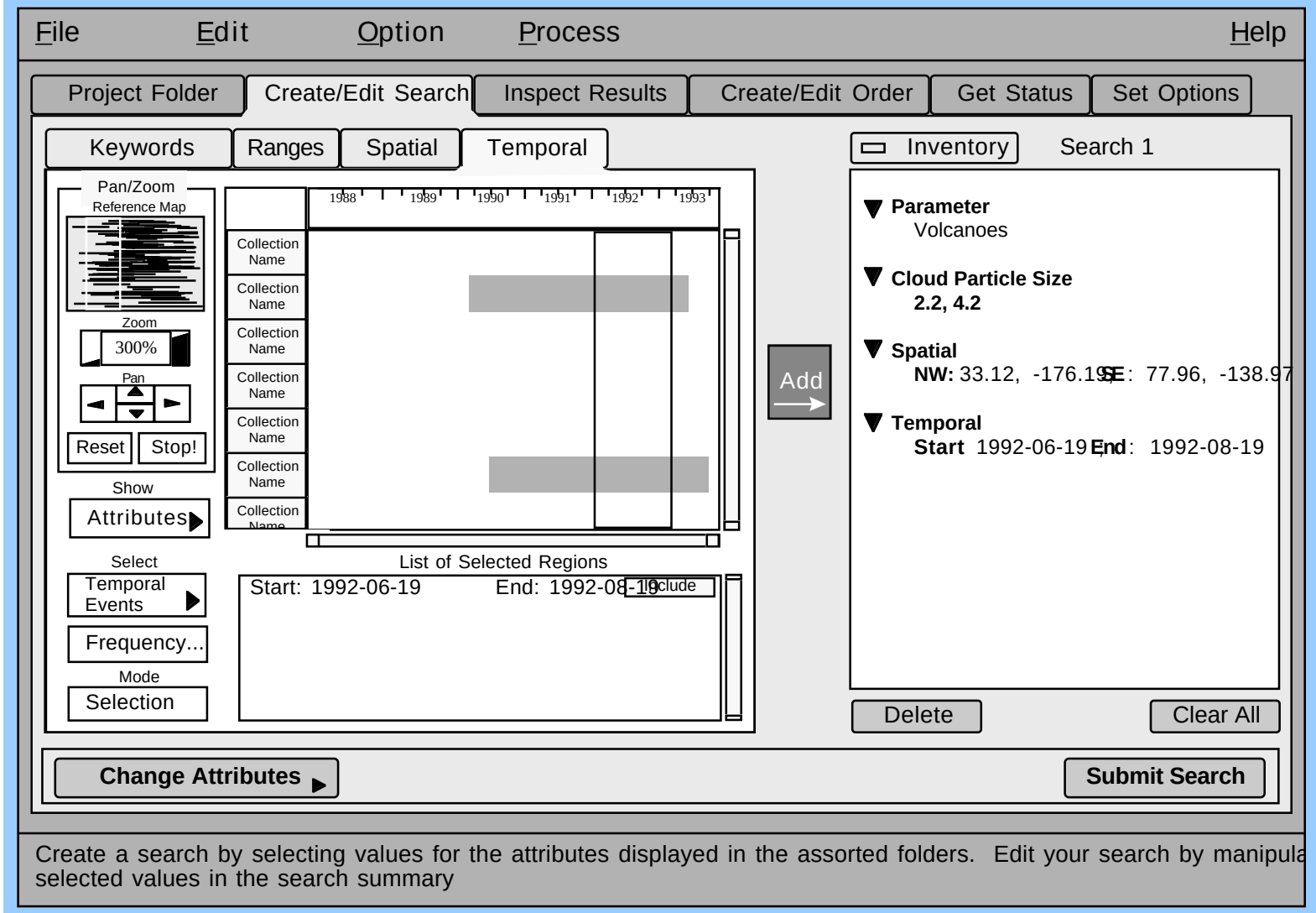
Functional Flows - Search Screen - Add Spatial values



Make a spatial selection by clicking and dragging on the map to create a bounding rectangle or polygon.

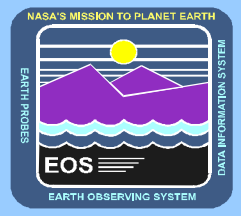
- **Spatial selection is a specialized case of range selection**
- **Specialized features such as pan and zoom are available to assist the user in making spatial selections**

Functional Flows - Search Screen - Add Temporal values



- **Temporal selection is also a specialized case of range selection**
- **Formulated search is submitted to the DIM or DSS SDSRV**

Functional Flows - Search Status Screen



File Edit Option Process Help

Project Folder | Create/Edit Search | Inspect Results | Create/Edit Order | Get Status | Set Options

Search Status | Service Request Status | Order Status

Search	Search Sent	Search Complete	Retrieving Results	Results Complete	Search Aborted	Connection Failed	See Comments	Granule Count	View
Search1								0	Data

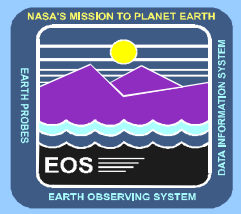
View status on your search

- Submitted search has a "session" with an ECS service
- Service is DMS DIM or DSS SDSRV
- Search session has a status
- Status screen will eventually become the Session Management Tool

Functional Flow - Search

- User selects attributes of interest
- User selects values for those attributes
- User submits the search
- Search is submitted to DMS DIM
- DIM routes the search to LIMs at DAACs
- LIMs route the search to data servers or gateways
- Each queried server responds and the responses are routed back to the DIM
- DIM returns results to CLS
- CLS displays results in JEST results screen

Functional Flow - Search Results Screen



File Edit Option Process Help

Project Folder | Create/Edit Search | Inspect Results | Create/Edit Order | Get Status | Set Options

Collections/Granules	Spatial	Temporal	Instrument/ Sensor	Proc. Level	Size	Work List	Detail	Cov.	Browse	Order
ASF_Glaciers										
Science:ASF_glac:1001	SW: 60.22, -153.56, NE: 61.33, -151.32	S: 1992-05-17 E: 1992-05-17	SAR	2	1 MB	☑	☐	☐	IB	☑
Science:ASF_glac:1002	SW: 60.22, -153.56, NE: 61.33, -151.32	S: 1992-06-21 E: 1992-06-21	SAR	2	1 MB	☐	☐	☐	order	
Science:ASF_glac:1003	SW: 60.22, -153.56, NE: 61.33, -151.32	S: 1992-09-10 E: 1992-09-10	SAR	2	1 MB	☑	☐	☐		
Science:ASF_glac:1004	SW: 60.22, -153.56, NE: 61.33, -151.32	S: 1992-08-30 E: 1992-08-30	SAR	2	1 MB	☐	☐	☐	IB	

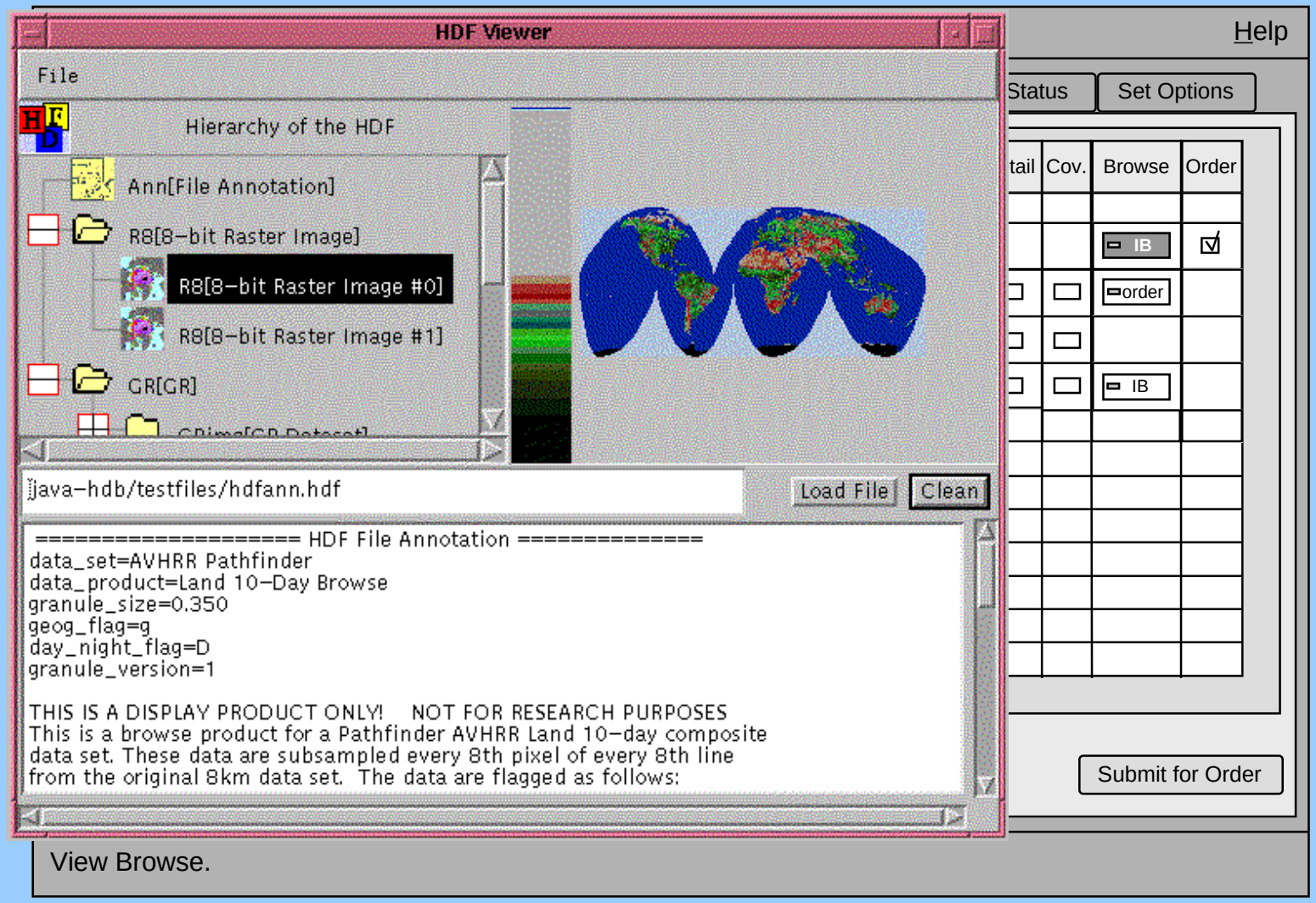
Results 1 | Results 2 | Results 3 | Results 4 | Working 1 | Working 2 | Working 3

Select Attributes ▶ | Sort Attributes... | Sort Data... | Filter Data... | Submit for Order

Inspect Search Results.

- **Display results in configurable table format**
- **Allows manipulation of results set (includes filtering, sorting, and graphically viewing granule coverage)**
- **Allows selection of services including browse and order**

Functional Flow - Browse Tool

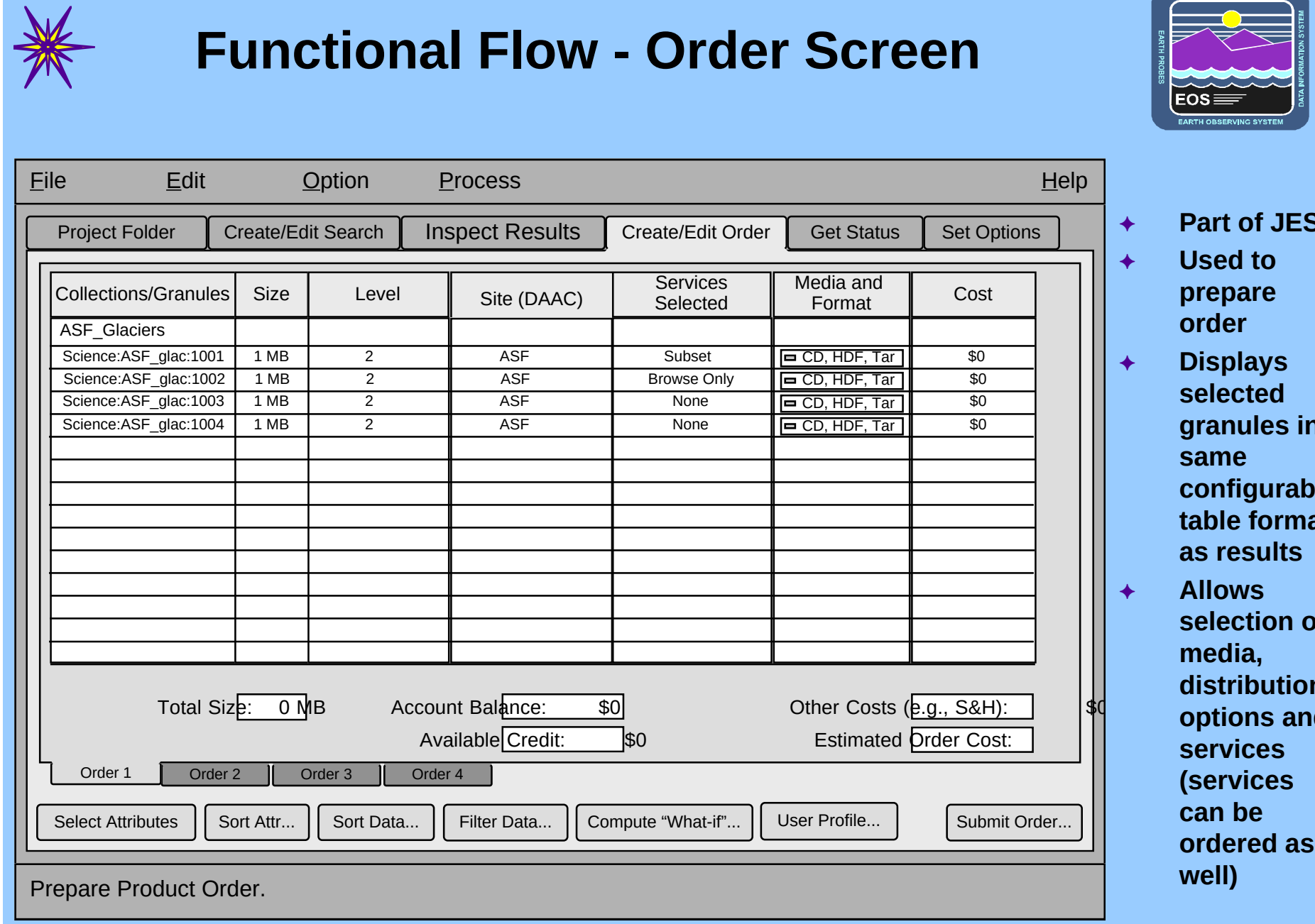


- **Interactive Browser**
- **Part of JEST**
- **Allows viewing of HDF file structure, browse image and supporting metadata**

Functional Flow - Browse

- User selects browse option from results screen
- CLS creates browse request
- Browse request is sent to the DIM
- DIM routes request to the appropriate LIM or data server
- Browse is streamed to CLS via DIM
- CLS displays file in HDF viewer

Functional Flow - Order Screen



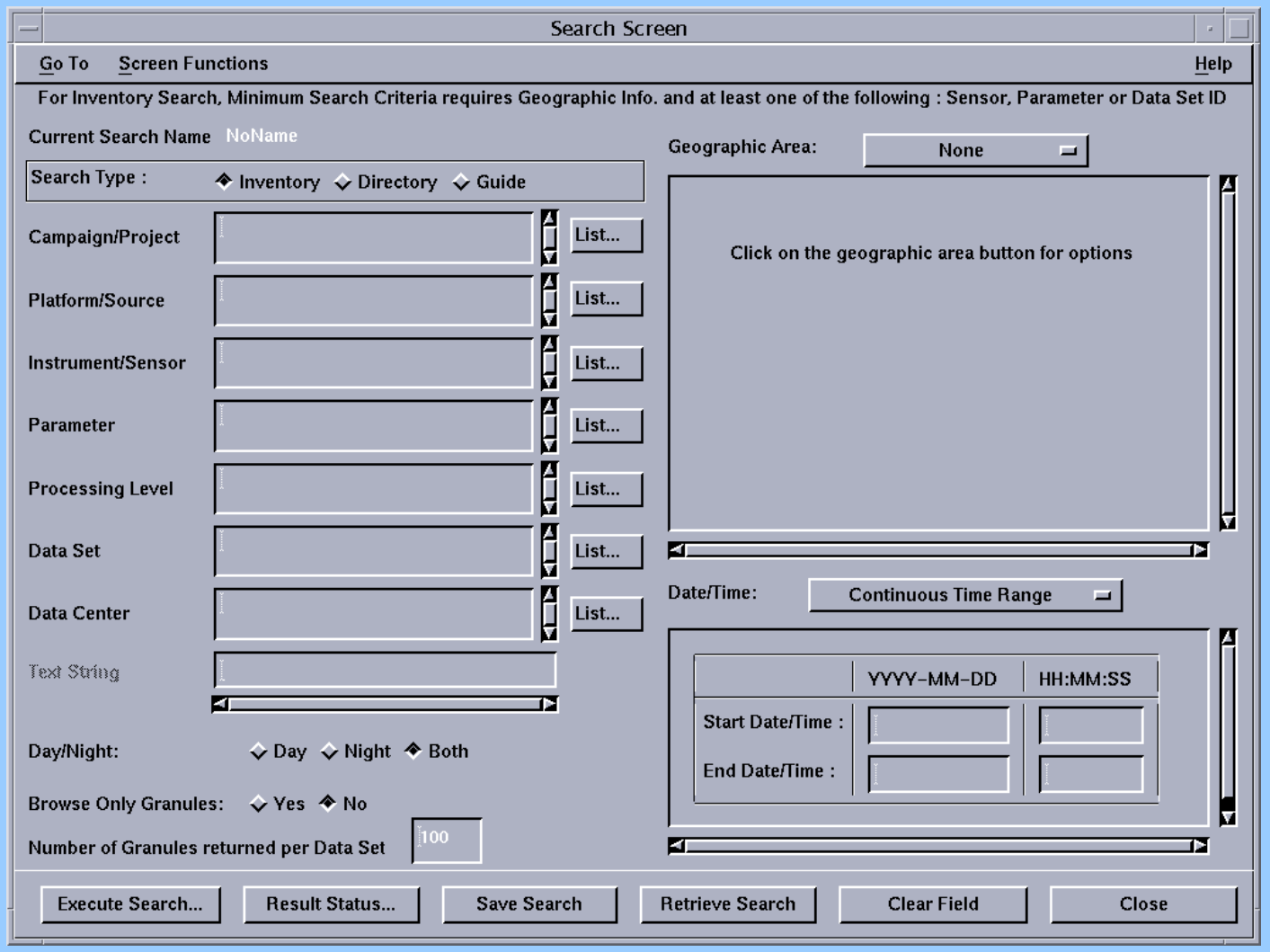
- **Part of JEST**
- **Used to prepare order**
- **Displays selected granules in same configurable table format as results**
- **Allows selection of media, distribution options and services (services can be ordered as well)**

Functional Flow - Order

- User selects desired granules from the results screen
- Granules are moved into the order preparation screen
- User selects media, distribution options and examines price estimate info
- User submits order
- Order is shipped to MSS for credit check
- MSS returns order with credit OK
- CLS displays a confirmation screen indicating estimated price and shipping time
- User confirms order
- Order is shipped to DIM (for processing) and MSS (for tracking)
- CLS status screen displays status of order
- When order is complete, DDIST sends notification that order data is available

V0 IMS

Search Screen



- X/Motif GUI built for the Version 0 Information Management System
- Predecessor of ECS Client
- Used with modifications as Release A Client
- Also being used as the fallback for the Release B B.0 Client
- Known as B.0 Search and Order Tool or B0SOT
- Has basic search and order capabilities
- Integrates with ECS by using the V0-ECS Gateway

Summary

- CLS provides an integrated tool suite through which a user can easily access ECS services.
- CLS consists of a number of integrated tools which access the different ECS services.
- Search and order are the primary services offered to the end-user. Other services such as Browse assist the end-user in selecting data.
- The majority of CLS software is implemented for use on the web.
- Integrated access to ECS services is largely supported by JEST, the Java Earth Science Tool.